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(21) International Application Number: PCT/RU00/00088 (22) International Filing Date: March 17, 2000 (3/17/00) (30) Priority Data: 99105549 March 18, 1999 (3/18/99) RU (71) Applicant (<i>for all listed states except US</i>): LS PRIVATE JOINT-STOCK COMPANY [RU/RU]; 15 Vosstaniya St., St. Petersburg 193036 [ZAKRYTOYE AKTIONERNOYE OBSHESTVO «LS», St. Peters- burg (RU)]. (72) Inventor(s); and (75) Inventor-Applicant(s) (<i>US only</i>): Leonid Ivanovich AKOPOV [RU/RU]; 7 Kolpinskaya St., Apt. 6, St. Peters- burg 197198 (RU) [AKOPOV, Leonid Ivanovich, St. Pe- tersburg (RU)]; Andrei Vyacheslavovich BELIKOV (RU/RU); 141 Narodnogo opolcheniya Ave., Apt. 86, St. Petersburg 198217 (RU) [BELIKOV, Andrei Vyachesla- vovich, St. Petersburg (RU)]; Sergei Borisovich BIRJU- CHINSKY [RU/RU]; 200 Moskovsky Ave., Bldg. 4, Apt. 94, St. Petersburg 196135 (RU) [BIRJUCHINSKY, Ser- gei Borisovich, St. Petersburg (RU)]; Mikhail Vladimiro- vich INOCHKIN [RU/RU]; 73 Kronverksky Ave., Apt. 29, St. Petersburg 197198 (RU) [INOCHKIN, Mikhail Vladimirovich, St. Petersburg (RU)].		(74) Common Representative: Leonid Ivanovich AKOPOV [RU/RU]; 7 Kolpinskaya St., Apt. 6, St. Petersburg 197198 (RU) [AKOPOV, Leonid Ivanovich, St. Peters- burg (RU)]. (81) Listed States: AT, AU, BR, CA CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KR, MX, NO, NZ, PL, PT, SE, SI, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Publications: <i>Without report of international search and with republi- cation upon receipt of report.</i>
(54) Title: DEVICE FOR THE THERAPEUTIC AND COSMETIC PHOTO-PROCESSING OF BIOLOGICAL TISSUES AND METHOD FOR USING THE SAME (54) Title: DEVICE FOR THE THERAPEUTIC AND COSMETIC PHOTOPROCESSING OF BIOLOGICAL TISSUES AND METHOD OF USING SAME (57) Abstract: The present invention relates to a method and an apparatus for permanently or temporarily removing human hair, for miniaturising the same or for changing the colour thereof. This apparatus can also be used for coagulating blood vessels, veins or a selective injury of the derma collagen in order to regenerate the same. This apparatus uses one or more incandescent lamps (4) in which the radiation spectrum (34) can be modulated in order to heat slowly and efficiently the derma (17) and in order to heat locally the hair follicles (35). This apparatus also includes an optical system that converts the blue-green portion on the spectrum of the incandescent lamps (4) into a red region of the spectrum, that provides a highly efficient concentration of converted radiation from the incandescent filament (37) of the lamps (4) on the area of biological tissues to be treated, and that ensures a repeated recirculation towards the skin (17) of the radiation scattered by the same.		

(57) Abstract:

The applicants claim a device and a process for permanently or temporarily removing human hair, or for miniaturizing or recoloring same. The device can also be used for coagulating blood vessels and veins, and for selectively damaging dermal collagen in order to regenerate the same. The device employs one or more incandescent lamps (4) with modulation of their spectrum of radiation (34), affording effective gentle warming of the dermis (17) and local heating of the hair follicle (35). The device contains an optical system that converts the green-blue part of the spectrum of incandescent lamp (4) to the red part of the spectrum, and also provides highly efficient concentration of the converted radiation of incandescent filament (37) of lamp (4) onto the area of biological tissue (17) being processed and multiple circulation of radiation scattered from skin (17) back to skin (17).

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